

Applicant(s): Thomas C. Prentice et al.
U.S.S.N.: 09/928,112

In the Claims

1. (previously presented) A dispensing system for dispensing a material onto a substrate, the system comprising:
a dispensing element having a metering device that controls a quantity of the material dispensed from the dispensing element to the substrate; and
a calibration device to calibrate the quantity of material dispensed having a dish that receives the material from the dispensing element during a calibration routine of the dispensing system, the dish including a conical protuberance extending from a center portion of the dish.
2. (previously presented) The system of claim 45, wherein the dish is removably connected to the calibration device.
3. (previously presented) The system of claim 45, wherein the dish further includes a tab for conveying the dish to or from the calibration device.
4. (previously presented) The system of claim 45, wherein the protuberance operatively removes an amount of the material dispensed from the dispensing element during the calibration routine.
5. (previously presented) The system of claim 45, wherein the dish is disposable.
6. (previously presented) The system of claim 45, wherein the dish will withstand a temperature that will allow an amount of the material collected in the dish to cure.
7. (previously presented) The system of claim 45, wherein the dish is fabricated from a generally conductive material.
- 8-21. (canceled)

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22-29. (canceled)

30-44. (canceled)

45. (previously presented) The dispensing system of claim 1 further comprising a frusta-conical pedestal, coupled to the calibration device, for supporting the dish while the dish receives the material from the dispensing device.

46. (previously presented) The dispensing system of claim 45 wherein the dish includes an annular trough portion surrounding the conical protuberance, and wherein the protuberance is substantially centered in the annular trough.

47-51. (canceled)

52. (previously presented) A dispensing system that dispenses a material onto a substrate according to a dispensing pattern, the dispensing system comprising:

(a.) a gantry system;

(b.) a dispensing pump, coupled to and movable on the gantry system, to dispense a quantity of the material having a tail of the material and constructed and arranged to follow a calibration pattern that is representative of the dispensing pattern;

(c.) a calibration system having a dish, the calibration system constructed and arranged to collect the quantity of material dispensed from the pump during the calibration pattern in the dish, measure the amount of the material, and compare the amount of the material with a target quantity,

wherein the dish comprises a protuberance such that the pump and the dish move relative to one another, and as the pump passes the protuberance, the tail of the material contacts the protuberance and the dish collects the dislodged tail of material for measurement by the calibration system; and

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(d.) a controller to adjust characteristics of the dispensing system when a difference between the measured material and the target quantity is greater than a predetermined tolerance.

53. (previously presented) The dispensing system of claim 52 wherein the calibration system is constructed and arranged to repeat a calibration routine prior to dispensing on a substrate until the difference between the measured material and the target quantity is less than the tolerance.